

ELECTROHYDRAULIC BRAKE SYSTEM FOR MOTOR VEHICLES

ABSTRACT

Disclosed is a brake system which can be operated in three modes of operation, a non-boosted mode of operation, a hydraulic-booster mode of operation, and an electronically controlled mode of operation. The brake system includes a master cylinder (1), a first piston (2) coupled to a brake pedal (3), a second piston (4) actuating the master cylinder (1), and a third piston (5) actuable by the first piston (2), with at least one elastic element (6, 7) being provided between the first and the third piston (5), and all three pistons (2, 4, 5) are arranged in a housing (8). Further, there is provision of a hydraulic pressure source (9) and a valve device (10) for reducing the pressure of the pressure source (9) to a value of pressure that is fed into a space (11) by which the second piston (4) and the third piston (5) are separated from each other in such a fashion that the third piston (5) is acted upon by the pressure acting upon the second piston (4) in the direction being opposite to the direction of application of the second piston (4). A device (29 - 31, 45) which, by way of a variation of the pressure fluid volume in the hydraulic chamber (21) controlled by electromagnetic valve, allows a pedal performance which differs from the brake pedal characteristics that is predefined by the brake pedal characteristics simulation device.